REMARKS

Present Status of the Application

Claims 1-6 are presently pending in application. Claims 1-6 are rejected under 35 USC 102(e) as being anticipated by Jain et al. (US Patent No. 6,376,371, "Jain"). These rejections are respectfully traversed.

Summary of Applicant's Invention

The Applicant's invention is directed to an bonding pad structure having a passivation layer over a copper layer with a pad window to expose a portion of the copper layer, a barrier layer conformal to a profile of the pad window, and an aluminum pad located in the pad window. The metal layer can be an aluminum, aluminum alloy or aluminum dominated layer for providing a better adhesion property between the copper layer and the bonding wire.

Discussion of Office Action Rejections

The Office Action rejected claims 1-6 under 35 U.S.C. 102(e), as being anticipated by Jain et al. (US Patent No. 6,376,371). Applicants respectfully traverse the rejections for at least the reasons set forth below.

Independent claim 1 states:

1. A boding pad structure, comprising:
a copper layer;

a passivation layer over the copper layer having a pad window to expose a portion of the copper layer;
a barrier layer conformal to a profile of the pad window; and
an aluminum pad located in the pad window.

Independent claim 4 states:

4. A bonding pad structure, comprising:
a copper layer;
a passivation layer over the copper layer having a pad window to expose a portion of the copper layer;
a barrier layer conformal to a profile of the pad window and extended along a portion of the surface of the passivation layer from the pad window; and
an aluminum pad located over the barrier layer.

Independent claims 1 is allowable for at least the reason that Jain does not disclose, teach, or suggest the features "***a barrier layer conformal to a profile of the pad window***" and "***an aluminum pad located in the pad window***", that are highlighted in claim 1 above. Independent claims 4 is also allowable for at least the reason that Jain does not disclose, teach, or suggest the features "***a barrier layer conformal to a profile of the pad window and extended along a portion of the surface of the passivation layer from the pad window***" and "***an aluminum pad located over the barrier layer***", that are highlighted in claim 4 above.

Jain does not disclose or suggest any application of the method to a bonding pad structure. In fact, the method of Jain can not be provided for a bonding pad structure because in a bonding pad structure, a plurality of openings will be formed on a layer, in which each of the openings will have a barrier conformal to the profile of the opening and an aluminum pad located in the opening respectively. Furthermore, in the present invention as defined in claim 1, the aluminum pad is located in the pad window. While, in Jain, the second metal layer 66 is located both inside

and outside the opening 52. See Fig. 6. Indeed, Jain teaches that the combination of metal layer 66 and barrier layer 64 forms a bit liner 62 in interconnect trench 54 and via opening 52. Col. 5, lines 53-55. Therefore, Jain teaches away from forming an aluminum pad located in a pad window.

The term "*an aluminum pad*" in claims 1,4 has shown the structure of this invention is a bonding structure, not a interconnect structure. Jain does not teach a bonding pad structure.

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-6 are not anticipated and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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